Abstract of the Invention (in clean copy)

A litho printing press comprising one or more litho ink printing stations, each of which has paste-type, oil-based litho ink applicating means for depositing said oilbased litho ink onto a printing plate, an adjacent first rotatable cylinder called the plate cylinder on which is clamped a non-planar, laminate multiple layer flexible printing plate which receives said oil-based litho ink from the ink applicator means in a nip therebetween, and at least a second rotatable cylinder called the impression cylinder over which passes the substrate to be printed upon in a nip between the substrate and either the plate cylinder or another and intermediate rotatable cylinder called the blanket cylinder. This results in elimination of dampener and the dampening solution. The non-planar multiple layer flexible printing plate has an outermost layer for receiving the litho ink after it has been adhesively secured in the pre-press department of the printing plant to an innermost layer of a different material. The outermost layer is a see-through translucent or transparent synthetic plastic. The different material of the innermost layer can be either a synthetic transparent plastic or an imaged metal plate. In the pre-press department of the printing plant the outermost layer is cut through to the innermost layer manually or by a CAD-CAM machine to provide spaced cut-out areas with adjacent projections which receive the oil-based litho ink and then deposit said ink directly or indirectly on a substrate. The elimination of the dampening solution and the dampener from the print station by the non-planar laminate multiple layer flexible body printing plate, called a "Mike Plate" or "Modified Mike Plate" clamped on the plate cylinder makes possible a litho printing press without a blanket cylinder. That is, a litho printing press with only two cylinders per print station instead of three, and wherein said "Mike Plate" or "Modified Mike Plate" clamped on the plate cylinder prints directly upon the substrate, sheetfed or webfed. All this is done at low cost with less downtime on-press, and with significantly less waste and spoilage and other attendant benefits all of which contribute to quicker delivery of jobs by the printer to his customer.

Abstract of the Invention (with changes indicated)

A <u>litho</u> printing press which comprises a number of different comprising one or more litho ink printing stations, each of which has an paste-type, oil-based litho ink applicator applicating means for depositing said oil-based litho ink onto a printing plate, an adjacent first rotatable cylinder for receiving the ink called the plate cylinder on which is clamped a non-planar, laminate multiple layer flexible printing plate which receives said oil-based litho ink from the ink applicator means in a nip therebetween, and at least a second rotatable second cylinder called the impression cylinder over which passes the substrate to be printed upon in a nip between the substrate and a either the plate cylinder or another and intermediate rotatable cylinder which can be the first or another cylinder. At least one of the printing stations has a multi-layered flexible body attached to the periphery of the first evlinder, called the blanket cylinder. This results in elimination of dampener and the dampening solution. The multi-layered non-planar multiple layer flexible body printing plate has an outermost layer-which receives for receiving the litho ink, and which is after it has been adhesively secured in the pre-press department of the printing plant to an innermost layer of a different material. The outermost layer is a see-through translucent or transparent synthetic plastic. The different material of the innermost layer can be either a synthetic transparent plastic or an imaged metal plate. In the pre-press department of the printing plant The the outermost layer is cut through to the innermost layer manually or by a CAD-CAM machine to provide spaced cut-out areas which leave outermost layer areas which project beyond the cut-out areas to form-ink-applying areas to cover substrate areas to be printed upon. and which extend over areas much greater in size than any substrate areas which are to receive letters and/or numbers. At least another one of the printing stations has a rotatable ink-receiving first cylinder for receiving ink in a nip with the associated ink applicator, and which cylinder has a periphery for printing letters and/or numbers each of a size which is a fraction of the size of the areas which receive ink from the

projecting outermost layer of the multi-layered flexible body. with adjacent projections which receive the oil-based litho ink and then deposit said ink directly or indirectly on a substrate. The elimination of the dampening solution and the dampener from the print station by the non-planar laminate multiple layer flexible body printing plate, called a "Mike Plate" or "Modified Mike Plate" clamped on the plate cylinder makes possible a litho printing press without a blanket cylinder. That is, a litho printing press with only two cylinders per print station instead of three, and wherein said "Mike Plate" or "Modified Mike Plate" clamped on the plate cylinder prints directly upon the substrate, sheetfed or webfed. All this is done at low cost with less downtime on-press, and with significantly less waste and spoilage and other attendant benefits all of which contribute to quicker delivery of jobs by the printer to his customer.